



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,339	02/07/2001	Paul A. Merendino SR.	FIRE.P9910112	1466

7590

07/21/2003

John H. Hornickel
Chief Intellectual Property Counsel
Bridgestone/Firestone, Inc.
1200 Firestone Parkway
Akron, OH 44317

EXAMINER

FERGUSON, MARISSA L

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/778,339

Applicant(s)

MERENDINO, PAUL A.

Examiner

Marissa L Ferguson

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/21/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Bezek et al. (U.S. Patent 6,278,363) in view of Winston et al. (U.S. Patent 5,472,032) and Kawashima et al. (US Patent 5,111,585).

Regarding claim 1, Bezek et al. teaches a method of testing a tire comprising steps of taking tire related measurements (Abstract) and compiling data from multiple test runs (Column 4, Lines 22-27, and references made throughout pattern of multiple steps). However, he does not specifically teach maintaining a pressure within a tire using a pressure –controlling device. Winston et al. teaches a tire pressure maintenance system that discloses a system that maintains pressure within a tire at a predetermined pressure (Abstract). Winston et al. does not explicitly disclose conducting tests while mounted on a vehicle and compiling non-pressure related data. Kawashima et al. teaches testing wheel alignment (Abstract, Column 1, Lines 1-10 and references made throughout patent) while mounted on a vehicle (Figures 1 and 2).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device taught by Bezek et al. to include the

maintenance system as taught by Winston et al. for the purpose of maintaining and regulating pressure within a tire and further modify the device to include the non-pressure related data as taught by Kawashima et al., since Kawashima et al. teaches a method and apparatus that enables efficient and accurate alignment of vehicle wheels.

2. Claims 2-11 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Bezek et al. (U.S. Patent 6,278,363) in view of Winston et al. (U.S. Patent 5,472,032) and Kawashima et al. (US Patent 5,111,585) as applied to claim 1 above, further in view of Markow et al. (U.S. Patent 5,472,032).

Regarding claims 2,4-7, and 9, Bezek et al. , Winston et al., and Kawashima et al. together teach the claimed device except for adjusting and releasing a gas at a desired pressure. Markow et al. teaches an inflation/deflation system that discloses adjusting and releasing a gas at a predetermined pressure (Column 4, Lines 15-31). Also with respect to claims 2, 4-7 and 9, a sensor compares and adjusts the mounting position, however it is obvious that any ordinary artisan skilled in the art can program a sensor to compare, adjust, and/or release a gas at any given specific tire pressure. The method and steps are also conventional in the art. Markow et al, does however disclose releasing a gas at a predetermined pressure of 50 psig (Column 4, Lines 22-24).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the device taught by Bezek et al. to

Art Unit: 2854

include a gas releasing system as taught by Markow et al. , since Markow et al. using a release system for exhausting excess gas from a tire.

Regarding claim 3, Bezek et al. teaches detecting motion to determine whether a tire/wheel assembly is at rest (Column 3, Lines 29-31 and Column 11, Lines 3-7).

Regarding claims 8 and 10, Bezek et al. , Winston et al., and Kawashima et al. together teach the claimed device except a solenoid valve and a plate with instrumentation. Markow et al. teaches a tire inflation/deflation system that discloses a solenoid valve (Column 4, Lines 44-47 and Column 5, Lines 45-50) and an instrumentation plate(64) that is used for inflating/deflating a tire.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the device taught by Bezek et al. to include the system as taught by Markow et al., since Markow et al. teaches regulating an inflation pressure system .

3. Claims 12-19,21,23 and 24 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Winston et al. (U.S. Patent 5,472,032).

Regarding claim 12-17, Winston et al. teaches a pressure controlling device comprising a tube (94), a valve (95), a pressure sensor (18), a controller 14), and a solenoid valve (Column 4, Lines 44-47 and Column 5, Lines 47-50). However, he does not explicitly disclose a controller that opens and/or closes a valve if the difference of a pressure is less than 1/4 psi, 1/8 psi, 1/16 psi, 1/32 psi and 1/36 psi. Winston et al. does at least teach the use of a controller valve that opens and/or closes to adjust at a

Art Unit: 2854

target pressure (Column 3, Lines 56-67, Column 4, Lines 26-34 and Column 4, Lines 44-53).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to program a controller to open and/or close a valve to adjust at any desired pressure difference, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claims 18 and 19, Winston et al. discloses a gas source, which can be opened to introduce a gas through a connection tube (Abstract) and a pressure setter (10).

Regarding claim 21, Winston et al. teaches a fluid source and a valve which can be opened to introduce a fluid source through a connection tube into a tire and wherein a controller opens the valve (Column 4, Lines 15-61).

Regarding claims 23 and 24, Winston et al. teaches a pressure controlling device that is mounted and rotates on a tire/wheel assembly of a vehicle (Column 3, Lines 4-16).

4. Claims 20 and 22 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Winston et al. (U.S. Patent 5,472,032) in view of Bezek (U.S. Patent 6,278,363).

Regarding claim 20, Winston et al. teaches the invention claimed, however he does not explicitly disclose a motion detector. Bezek et al. teaches detecting motion to determine whether a tire/wheel assembly is at rest (Column 3, Lines 29-31 and Column

Art Unit: 2854

11, Lines 3-7). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the device taught by Winston et al. to include a motion detector as taught by Bezek et al., since Bezek et al. teaches detecting motion for the purpose of gathering and evaluating different pressures of a tire/wheel.

Regarding claim 22, Winston et al. teaches the invention except for taking and compiling test measurements/data to evaluate tire performance. Bezek et al. teaches an air pressure monitoring system that discloses taking and compiling test measurements/data to evaluate tire performance (Column 4, Lines 22-27, and references made throughout pattern of multiple steps).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device taught by Winston et al. to include the system as taught by Bezek et al. for the purpose of monitoring pressure within tires.

Response to Arguments

4. Regarding claim 1, Applicant's arguments filed 4/21/03 have been fully considered but they are not persuasive. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally

Art Unit: 2854

available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the applicant claims "taking tire related measurements, maintaining pressure and compiling data", Bezek et al. teaches a method and system for monitoring, compiling, evaluating, and maintaining physical parameters, as well as pressure (Abstract) and Winston et al. teaches a tire pressure maintenance system that maintains a pressure of a fluid within a tire. This argument is not persuasive because the applicant claims "taking tire related measurements and maintaining pressure", the examiner considers both references to be within the same field of endeavor of maintaining and testing pressure of a tire.

5. Regarding claims 2-19 and 21, Applicant's arguments filed 4/21/03 have been fully considered but they are not persuasive. Regarding the releasing a gas and/or adjusting a tire pressure if the pressure is above or below 1/4 psi, 1/16 psi, 1/36 psi: Markow et al. discloses adjusting and releasing a gas but does not disclose a particular value for this parameter. However, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide releasing a gas above or below 1/4 psi, 1/16 psi, 1/36 psi, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the "optimum range" involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Art Unit: 2854

6. Applicant's arguments with respect to claims 20, and 22-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L Ferguson whose telephone number is (703) 305-3194. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (703) 305-6619. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Marissa L Ferguson
Examiner
Art Unit 2854

Mrf

July 14, 2003



ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800